

TENNESSEE GREEN STAR PARTNERSHIP MEMBER HIGHLIGHT



By: Vaughn Cassidy

NWI Nashville, an NWI family company, has a long history in the machining, assembly, and processing of large aircraft assemblies. The company specializes in long and large parts up to 145 ft. in length and manufactures components for its aerospace customers. The facility manufactures the wing panels, spar assemblies, stringers and wing skins for assorted aircraft original equipment manufacturers (OEM). NWI Nashville is a fully vertically integrated fabrication facility that spans 2.1 million square feet and specializes in large scale machining of aluminum and aluminum lithium components, forming, processing, painting, auto-riveting, and assembling major structural aircraft structure. Its processing lines are NADCAP (**National Aerospace and Defense Contractors Accreditation Program**) accredited for chemical processing (chromic acid anodize), heat treatment and Non-Destructive Testing (NDT).

The NWI Nashville site has an incredibly interesting historical manufacturing journey. It first began operations in 1938 as Vultee, a US Military contractor producing bombers, fighters, and other aircraft parts during World War II. The facility is now one of the oldest Tennessee Green Star Partners, having many company names along the way over the last thirteen years since joining the program as Vought Aircraft.

Currently the facility is only using around 800,000 square feet of the 2.1 million under roof. Even so, the large-scale machining is truly impressive. Philip Simon, the Senior Environmental Health and Safety Manager, leads environmental compliance at the Nashville site and also at another NWI location in Wichita, Kansas, where he also sits on the City of Wichita Sustainability Integration Board. Regarding the Nashville facility, Mr. Simon stated, "It is truly a matter of scale at this facility. We have so many different alloys. Last year we recycled 4,292,069 pounds of metals. That's aluminum and steel."

FEATURED THIS MONTH

- Established in 1938
- Partner since 2009
- Employs 270

FUN FACT:

- Has been in the same location since 1938
- Once manufactured military vehicles including bombers and fighters for WWII
- Reduced hazardous materials waste by over 50% in 2021
- Reuses 92 million gallons of water each year (94%)



The metals recycled include steel shot peening, which is used for stress relief and for forming the wing contour of parts made from the various machined aluminum alloy parts. The wing stringers and wing panels are then anodized in a chromic acid bath, primed, and auto-riveted together. The chromic bath and corresponding onsite water treatment facility are also of scale. The wings are sometimes nearly 100 feet in length. The computer numerical control, or CNC machines, hoisting mechanisms and bath chambers require substantial amounts of water and paint in the production process.

In 2021, the facility consumed well over 97 million gallons of water with a reuse of more than 92 million gallons. That is an annual reuse rate of over 94%, with the facility achieving water recovery rate over 97% during some months.

Even with these impressive numbers, Philip Simon is more interested in the quality of recovery, reduction, and recycling than quantity. Last year, with several specialty alloys and coatings in the operation, NWI Nashville managed to reduce the overall footprint for hazardous materials by 50%. "Our painting is done entirely manually. For our product, it's still better and more efficient to have the artful touch of a real human being holding the paint gun. Filter media for over-spray is of high quality with a large holding capacity and longer life before disposal. The higher-grade filters allow us to change them far less frequently. For reference, back in 2014 compared to now, it is a reduction of 63% in disposal weight of the filters," said Simon,

NWI Nashville, like many of our Green Star Partners, has a corporate-wide environmental management system that offers comparable standards to ISO 14001 called E.A.R.T.H. The acronym stands for: Educate, Adhere, Reduce, Take and Have. **E**ducation of employees to be environmentally responsible while **a**dhering to legal procedures, **r**educing waste and overall consumption of natural resources, and **t**aking the initiative to embed environmental protection in the company's and employees' culture as well as **h**aving consideration for environmental issues in all business strategies and initiatives.



[The Tennessee Green Star Partnership](#) is a voluntary environmental leadership program designed to recognize industries in the state that are committed to sustainable practices. If you are interested in joining other sustainable industries in Tennessee by becoming a member, please contact us.

